

WHAT IS CLAIMED IS:

1. A method, applied to a microchip wafer, of removing pattern resist that remains after an etch of an underlying patterned layer that is supported by a spacer
5 layer, comprising the steps of:

cleaning the wafer with a develop solution;

ashing the surface of the wafer; and

removing the pattern resist that remains after the cleaning and ashing steps.

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2. The method of Claim 1, wherein the wafer is a micromechanical device wafer.

3. The method of Claim 1, wherein the wafer is a
15 DMD wafer.

4. The method of Claim 1, wherein the cleaning step substantially removes polymer residue from the pattern resist.

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5. The method of Claim 1, wherein the ashing step substantially removes hardened skin from the pattern resist.

6. The method of Claim 1, wherein the removing step
25 is performed with an acetate strip process.

7. The method of Claim 1, wherein the patterned layer is a metal layer.

8. A method of forming a patterned layer over a spacer layer on a wafer substrate, comprising the steps of:

depositing the spacer layer;
5 depositing the material for the patterned layer;
depositing a pattern resist material;
patterning the material for the patterned layer;
etching the resist material and the material for the patterned layer;
10 cleaning the wafer with a develop solution;
ashing the surface of the wafer; and
removing the pattern resist that remains after the cleaning and ashing steps.

15 9. The method of Claim 8, wherein the wafer is a micromechanical device wafer.

20 10. The method of Claim 8, wherein the wafer is a DMD wafer.

11. The method of Claim 8, wherein the cleaning step substantially removes polymer residue from the pattern resist.

25 12. The method of Claim 8, wherein the ashing step substantially removes hardened skin from the pattern resist.

30 13. The method of Claim 8, wherein the removing step is performed with an acetate strip process.

ATTORNEY DOCKET
TI-36187
(032350.B553)

PATENT APPLICATION

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14. The method of Claim 8, wherein the patterned layer is a metal layer.

15. A method of forming a micromirror array,
comprising the steps of:

forming control circuitry on a semiconductor
substrate;

5 depositing a first spacer layer on the substrate;
 patterning the first spacer layer to define hinge
support vias and spring tip support vias;

 depositing a hinge layer over the first spacer
layer;

10 forming at least one hinge etch mask on the hinge
layer;

 patterning the hinge layer to form at least one
hinge, wherein the pattern is formed using a pattern
resist layer and an etch process;

15 removing pattern resist that remains after the
preceding step by: cleaning the wafer with a develop
solution; ashing the surface of the wafer; and removing
the pattern resist that remains after the cleaning and
ashing steps;

20 depositing a second spacer layer over the hinge
layer;

 patterning the second spacer layer to define mirror
support vias;

 depositing a metal mirror layer over the second
25 spacer layer;

 patterning the metal mirror layer to form an array
of micro mirrors; and

 removing the first and the second spacer layers.

16. The method of Claim 15, wherein the cleaning step substantially removes polymer residue from the pattern resist.

5 17. The method of Claim 15, wherein the ashing step substantially removes hardened skin from the pattern resist.

10 18. The method of Claim 15, wherein the removing step is performed with an acetate strip process.